



## Haven't We Been Here Before? The Road to CBP."

By Dr. Robert M. McNab

*A budget is just a method of worrying before you spend money, as well as afterward.*

Anonymous

In a recent briefing on Capabilities Based Planning (CBP) to the Senior Level Review Group (SLRG) of the Office of the Secretary of Defense (OSD), a simple statement proclaimed that "PPBS, the last major change in DoD resource management, was based on a decade of prior analytical development. CBP lacks this foundation; our challenge is to start building it now." Will CBP replace the Planning-Programming-Budgeting-Execution System (PPBES) or is CBP a return to the original vision of the Planning-Programming-Budgeting System (PPBS)? Is CBP PPBS by any other name? CBP, as proposed, envisions a common framework for planning, programming, and budgeting across the various functions of the DoD. CBP proposes to change the five year planning time horizon of PPBES to fifteen years. The programming time horizon is to remain at five years while budgeting is to be conducted on annual basis. CBP is to be a top-down budget system that focuses on the tradeoffs between risks and resources across a spectrum of threats. CBP would attempt to develop cost-effective capabilities that generate outcomes that would "increase costs to adversaries while suppressing our costs." These tradeoffs would not only occur within the Services but across Services.

In terms of spirit, CBP appears to be a return to the original intentions of PPBS. Introduced in the DoD in 1961 for the development of the FY1963 budget, PPBS attempted to introduce an explicit decision-making framework to the executive branch's budget formulation process. While the planning and budgeting phases of the PPBS system did not significantly differ from the existing federal budgeting process, the programming phase attempted, for the first time, to create an explicit, institutional linkage between the planning and budgeting components of the budget process. By

attempting to introduce constrained optimization techniques into the federal budgeting process, PPBS was seen as a means of encouraging an analytical, intertemporal approach to decision-making that emphasized the systematic evaluation of alternatives through the use of cost-benefit and systems analysis. PPBS encourages multi-year discounting, intertemporal tradeoffs among competing programs, and provided incentives for the complete accounting of all relevant costs, to include the positive and negative externalities associated with budgetary decisions. PPBS introduced one other significant innovation by attempting to explicitly link program elements (measurable inputs) and program categories (intermediate outputs and activities) to multi-year objectives.

Over time, the pressures of the annual budget process and the analysis requirements of PPBS created an incentive for the replacement of inter-service tradeoffs and multi-year analysis with *incremental budgeting*. With incremental budgeting, policymakers assume that the majority of an organization's budget is 'outside' the budget process. A baseline level of funding exists that, in most circumstances, is outside the purview of budget discussions. Last year's budget becomes the baseline for this year's budget and so on. The majority of effort in the budget process is expended on distributing incremental changes to the baseline level of funding among competing organizations.

While the appropriations-authorization-obligating process constrains budgeting to an annual basis, DoD has, over the course of the last four years, attempted to shift the focus from annual to biennial budgets. The off-year program/budget review, however, is an incremental strategy, that is, program change proposals are submitted to change funding levels but systematic reprogramming of resources across services is not likely to occur. A potential result, however, of these efforts is a reduction in the effort expended in the budget process in the off-years and a longer budgeting time horizon in the concurrent program/budget review years. Whether this effort would be continued under CBP is unclear.

If implemented as proposed, CBP would represent a shift towards the spirit of the original PPBS away from the incrementalist approach of PPBES. From the National Security Strategy, the Quadrennial Defense Review, and the guidance of the Secretary of Defense come the Strategic Challenges (Threats) and Strategic Objectives (Policies). The Challenges and Objectives, in turn, are disaggregated into the Planning Targets (Goals) and then into Joint Concepts (Forces). The Joint Concepts are employed to achieve the desired operational effects (Outcomes) through the employment of Capability Options (Combinations of inputs to achieve the desired outcome). The selected capabilities are reflected in the budget.

We note the similarity between the proposed CBP top-down planning process and that of the original PPB. PPB proposes a flow of information from threat to budget and then a return of information on tradeoffs and risks. Simply put, all threats cannot be addressed within the current budget, thus there are risks involved that policymakers must either accept or address through the additional commitment of resources.

Threat ↔ Policy ↔ Forces ↔ Budget

CBP would, as proposed would represent a similar flow of information. What is not clear, however, is whether the flow of information would be in both directions as the emphasis in CBP is on a top-down process. Given the need to analyze tradeoffs across functions and Services, we believe that the two-way flow of information is implicit in the design of CBP.

Challenges ↔ Objectives ↔ Targets  
Concepts ↔ Capabilities ↔ Budget

Of concern is the statement that CBP will be employed to apportion risk across the Strategic Challenges. Risk, by its very definition, is uncertain and may be quantified with a certain degree of precision. For a given budget, there will be many different combinations of risks across the challenges, that is, a five percent risk that we will not be able to meet and defeat a equivalent force in a tactical engagement; a twenty percent risk that we will not be able to train 50,000 local security troops within a given period of time; and thirty percent risk of being unable to deter the employment of a weapon of

mass destruction in a given area of responsibility. To apportion or to assign risk assumes that we can effectively quantify, whether by objective or subjective assessment, these risks in combination with the resources and capabilities needed to mitigate them. It further assumes that we will be able to objectively examine the tradeoffs among the different risk combinations and to conclude that a marginal increase in the probability of conventional warfare defeat is 'worth' the marginal reduction in the probability of the use of a weapon of mass destruction. Such analysis, while laudable, may be beyond the capabilities of the DoD in the near future. We may not, as much as we would like to believe, be able to control risk so that we may apportion it.

Is there a theory to guide our analysis of CBP and PPBES? A repeated adage is the lack of a unified budgetary theory in the fields of public finance and public administration (Forrester and Adams, 1997). Unlike microeconomic theory with its testable hypothesis of consumer demand, there are numerous theories of public budgeting, to include, but not limited to, incremental budgeting, performance-based budgeting, capital-improvement budgeting, transaction-cost budgeting, and so on. Whether descriptive (what is being done) or normative (what should be done), these theories have not, in general, been adequately linked with existing budgetary processes. Descriptive theories often fail to 'translate' into different environments; what works in the private sector may not work as well in the absence of the profit motive in the public sector. Normative theories that suggest techniques to improve efficiency and effectiveness (PPBS, Zero-Base Budgeting, Performance Budgeting) are often abandoned in the face of complex administrative and political institutions. CBP, we believe, faces challenges similar to those in past efforts to reform public budgeting.

Whether CBP is an improvement over the existing process remains to be seen. The Strategic Challenges must not only be defined but must be capable of shifting over time to reflect the evolving security environment. Planning targets must be developed and joint concepts constructed across the Strategic Challenges. As the Services are being entrusted with developing capabilities to address the Strategic Challenged, the question of how OSD incentivize the Services to conduct joint

analysis and avoid stovepiping is unanswered. A method of tradeoff and risk analysis must be developed to support the goals and objectives of CBP. Finally, CBP must be tested using real world issues. Much of the framework, however, is already in place; DoD merely needs to employ PPBS as it was originally intended.

(Dr. Robert M. McNab is an Assistant Professor of Economics at DRMI. He has worked on tax and budgeting issues for the U.S. government, USAID, and the World Bank. He is currently examining the drive to implement capabilities based budgeting in the United States Department of Defense.)

#### References

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#### DRMI Activities

DRMI continues to educate participants from all over the world in its resident courses. DRMC 04-4 and DRMC 04-5 had participants from Israel, Argentina, Mexico, Norway, and Germany.

IDMC 04-2 started on 20 September with 42 different countries represented such as El Salvador, Jordan, Japan, and Ghana and a total of 52 participants. Two participants are recent

graduates of a DRMI course. Capt. Patrickson Albert (Dominica) attended MIDMC 04-8 in Belize. Due to his excellent aptitude in English, Col. Iurii Gutan (Moldova) graduated from DLIELC San Antonio, TX early. He arrived at DRMI in mid August and participated in DRMC04-5 before he started IDMC 04-2.

The renovation work on our new home in Halligan Hall continues on schedule as do our preparations for the move. We have assigned offices to faculty and staff, planned our support operations and arranged for housing for course participants while Herrmann Hall is renovated. Current plans are to move the week of 6 December after the graduation of IDMC 04-2. If all goes as planned, we will begin operations Halligan with the start of DRMC 05-1 on 9 January, 2005.

#### Upcoming Courses

Twice yearly, the International Defense Acquisition Resource Management Program (IDARM) offers a two week resident course in Principles of Defense Acquisition and Program Management. Our next course begins November 8, 2004. Beginning in March 2005, IDARM also will begin offering a two week resident course in Principles of International Procurement and Contracting as well as a two week course in International Negotiations. The target audience for each of these courses is mid level to senior defense acquisition military and civilian decision leaders.

For more information on these courses and in country courses visit our web site [www.nps.edu/idarm](http://www.nps.edu/idarm)

#### Faculty Research and Conference Presentations

Dr. Eva Regnier was awarded a grant from the National Science Foundation for work on her project "Evaluating competing models for production investment valuation" The research goals are to 1) investigate the effects of price dynamics on the profitability of real investments in manufacturing and 2) evaluate the power of modern investment evaluation methods, including real options and portfolio optimization methods, in predicting the effects of price dynamics. The research will include a theoretical portion to integrate financial profit models, production profit models, and economic models of price dynamics, as well as empirical tests to

evaluate the power of each model in predicting firm and shareholder profits. The impacts would include identifying which characteristics of price and output dynamics are the most important predictors of profitability, and generating evidence to support or refute the applicability of finance-based profit models to real investments in manufacturing. These results will be especially important for manufacturers that are considering conservation investments, supply contracts or vertical integration to reduce price risk, or diversifying their inputs or outputs—for example, a carpet fiber manufacturer considering a process that uses biomass instead of petroleum-based materials.

### **Curriculum Developments, Teaching News, and Faculty/Staff Service**

Dr. Robert McNab presented a series of lectures on micro-simulation modeling techniques in support of tax administration and tax analysis as part of the Fiscal Analysis of revenue Forecasting Course at Georgia State University in July 2004. He also presented his paper, "Does Decentralization Influence the Composition of Public Expenditures." at the 60th Congress of the International Institute of Public Finance in Milan, Italy. While in Spain, he chaired a session on fiscal decentralization and discussed a paper on fiscal on that topic. For Public Finance Review, he reviewed "The Effects of Public Investment on Private Investment in Developing Economies".

Dr. Anke Richter taught a Video Tele-Education class for the Systems Engineering Department entitled "Engineering Economics and Cost Estimation" which ran from July 5th to Sept 20th. The students were located at Camp Pendleton, CA; Ontario, CA; and Crane, Indiana. The class was taught from NPS using our VTE facilities. There were 33 students, equally divided among the remote sites. There were no students at NPS.

Dr. C. J. LaCivita recently began teaching the second iteration of a graduate course on strategic planning and budgeting for homeland security. The course is part of a new Naval Postgraduate School masters program in homeland defense and security inaugurated as the first of its kind in the U.S. in September of 2002. The program is a unique blend of in-

residence and web-based learning. Students in the program are federal, state and local officials involved in some facet of homeland defense and security. They take two classes each quarter, beginning each quarter with an intense week of classes at NPS. Then, they return home and continue their class work over the web, returning to NPS for another intense week at the end of the quarter to complete the courses.

Dr. Francois Melese, Dr. Anke Richter and Dr. C.J. LaCivita will lecture on decision analysis and budgeting in the 2004 Defense Restructuring Course sponsored by the School of International Graduate Studies in Monterey, CA. This year there will be approximately 25 participants from 14 countries gathering to examine the changing role of defense forces in national security.

During the third quarter of 2004, Dr. Jim Airola taught a course titled Cost-Benefit Analysis in the graduate school of business. The course is part of the MBA curriculum and follows an introductory economics course while introducing many of the decision-making concepts included in the DRMI courses.

Dr. Natalie Webb instructed a business-planning workshop in the Navy Corporate Business Course that was held September 26 through October 2 at the University of North Carolina, Chapel Hill. The course, offered by the Navy's Executive Learning Officer, is intended to develop a cadre of 05/06 officers and equivalent-ranking civilians that demonstrate the ability to analyze operations and cost structures of a unit against mission accomplishment, make appropriate changes (including elimination of activities), and assist flag and SES executives in transformational roles.

Dr. Francois Melese just returned from joint NATO-Marshall Center meetings where he was invited as an expert in Defense Economics. He moderated two sessions and led a discussion of defense restructuring with delegates from the Russian Federation and most of their neighbors in attendance. These NATO meetings had over 100 participants from 35 different partner countries... and was historic in that the Deputy Defense Minister of the Russian Federation opened the meetings. Her military counterpart, a top Russian military officer, covered all the key elements: Threat-Strategy/Policy-Forces-Budgets and our three-dimensional matrix (they

called a "hypercube"). A key outcome of the meetings was an announcement that a NATO team had been invited to go to Moscow in December. Dr. CJ LaCivita has agreed to represent the USA at this meeting, part of a joint strategy to bring the Russian Federation closer to NATO and to assist their transition to Western public budgeting and accounting standards. Among those who attended, DRMI grads at the meetings included: Dr. Andrej Falkowski of Poland, Ben Solomon from the Canadian MoD, and one of our recent graduates, Eyal Doley. Eyal is Head of the Planning Branch of the Israeli MoD and attended the meetings as an observer. Dr. Horst Schmalfeld (Major General (Ret)), Deputy Director of the Marshall Center and one of the organizers, is a 1981 DRMI graduate. He raised the possibility DRMI might offer a one or two-week module on Defense Resources Management for regularly scheduled courses at the Marshall Center.

## Publications

Martinez-Vazquez, J. and R.M.McNab. (2004). Fiscal Decentralization, Macrostability, and Growth. Submitted to Hacienda Publica Española-Revista de Economia Publica

Everhart, S., Martinez-Vazquez J., and R.M.McNab. (2004). Corruption, Investment, and Growth. Submitted to Journal of Development Economics.

Richter, A., & Loomis, B. (In Press) Health and economic impacts of an HIV intervention in out of treatment substance abusers: Evidence from a dynamic model. Health Care Management Sciences, (Accepted August 2003)

Richter A, Pladevall M, Manjunath R, Lafata JE, Xi H, Simpkins J, Brar I, Markowitz N, Iloeje UH, Irish W. (In Press) Patient characteristics and cost associated with dyslipidemia and related conditions in HIV-infected patients: A retrospective cohort study. HIV Medicine (Accepted September 2003)

Martinez-Vazquez, J. and R.M.McNab. (2004). Fiscal Decentralization, Macrostability, and Growth. Submitted to Hacienda Publica Española-Revista de Economia Publica

Everhart, S., Martinez-Vazquez J., and R.M.McNab. (2004). Corruption, Investment,

and Growth. Submitted to Journal of Development Economics.

## Papers

Dr. Francois Melese and Dr. Diana Angelis will publish a paper titled "Deterring Terrorists from Using WMD: a Brinkmanship Strategy for the United Nations" in the December 2004 issue of Defense & Security Analysis. The article explores terrorism as a form of "rational" criminal activity designed to influence an audience. The nightmare scenario is that terrorist organizations will escalate current conflicts by using chemical, biological or nuclear weapons to promote their cause. If terrorists can be assumed to make "rational" decisions, then it might be possible for a world leader such as the Secretary General of the United Nations to deter terrorists from using weapons of mass destruction (WMD) by using a brinkmanship threat. The paper examines the conditions that are necessary for the United Nations to make such a threat.

Dr. Jim Airola's paper titled "Trade and Wages: Lessons from Mexico" was accepted for presentation at the Latin American and Caribbean Economics Association annual meeting in San Jose, Costa Rica. Dr. Airola has a number of papers dealing with the recent experience of Mexico and the effect of NAFTA on the Mexican economy.

## Participant News

The Kiwanis Club of Monterey has announced its 2004 honorees for Military Recognition Day. The Naval Postgraduate School International Students of the Year are Lt. Cmdr. Dieter Jahn of the German Navy and Ms. Y. Ang of the Singapore Ministry of Defense.

Ang is enrolled in the Manpower Systems Analysis Master's Degree Curriculum, and is maintaining a grade point average of 3.99. She is currently working on a joint thesis that examines the impact of the Junior Reserve Officer Training Corps (JROTC) on military recruitment and retention.

## DRMI Course Catalog and Brochure

The 2005 course catalog and the Defense Resources Management Course brochure will soon be available. If you would like copies, please contact the Admin Office at 831-656-2104 (DSN 756) or send e-mail to [DrmiAdmin@nps.navy.mil](mailto:DrmiAdmin@nps.navy.mil)

## Future Resident Courses

### Defense Resources Management Course (four-week DRMC):

DRMC 05-1	10 Jan - 4 Feb 2005
DRMC 05-2	25 Apr - 18 May 2005
DRMC 05-3	23 May - 17 Jun 2005
DRMC 05-4	25 Jul - 18 Aug 2005
DRMC 05-5	22 Aug - 16 Sep 2005

Please contact Sue Dooley at (831) 656-2104 or [DrmiAdmin@nps.navy.mil](mailto:DrmiAdmin@nps.navy.mil) for quota and enrollment information.

### International Defense Management Course (eleven-week IDMC):

IDMC 04-2	20 Sep - 3 Dec 2004
IDMC 05-1	7 Feb - 20 Apr 2005

### 36th annual Senior International Defense Management Course (four-week SIDMC)

SIDMC 2005	27 Jun - 22 Jul 2005
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For additional information on any of our resident courses please contact Sue Dooley at (831) 656-2104 or e-mail [DrmiAdmin@nps.navy.mil](mailto:DrmiAdmin@nps.navy.mil)



The DRMI Newsletter is published quarterly by the Defense Resources Management Institute. Questions regarding content or the submission of proposed articles should be directed to the Newsletter Editor, DRMI 64We, 1522 Cunningham Rd, Monterey, CA 93943.